AMENDMENTS TO THE CLAIMS

1. (Currently amended) A method of preparing [[a]] circuit layout data for the application of optical and process correction (OPC), comprising:

receiving ~~a description of~~ data that represents a layer of an integrated circuit that is defined as a number of polygons;

fragmenting a polygon into a number of edge segments by defining a number of fragmentation endpoints that extend around the perimeter of the polygon;

defining control sites for the edge segments;

computing a simulation of the layout that estimates light intensity values in an area corresponding to a control site of at least one of the edge segments;

calculating a curvature of the light intensity ~~in the area of~~ in a direction parallel to the at least one edge segment at the control site; and

using the curvature of the light intensity to ~~refragment the edge segments of~~ adjust the number of fragmentation endpoints on the perimeter of the polygon.

2. (Currently amended) The method of Claim 1, wherein the ~~refragmentation of the edge segments is performed by~~ number of fragmentation endpoints is adjusted by:

~~increasing the density of the edge segments~~ adding one or more fragmentation endpoints to a polygon if the curvature of the light intensity calculated at a position corresponding to a control site for an edge segment is greater than a predetermined threshold.

3. (Currently amended) The method of Claim 1, wherein the ~~refragmentation of the edge segments is performed by~~ number of fragmentation endpoints is adjusted by:

calculating a curvature of the light intensity at a position corresponding to the control site and ~~in the area of~~ in a direction parallel to an adjacent edge segment; and

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~~decreasing the density of the edge segments~~ removing one or more fragmentation endpoints from the perimeter of the polygon if the curvature of the light intensity calculated ~~for~~ at a position of the control sites defined for adjacent edge segments is less than a predetermined threshold.

4. (Canceled)

5. (Currently amended) A computer ~~readable~~ storage medium including a sequence of program instructions recorded thereon that, when executed by one or more processors, cause the one or more processors to implement the method of any of ~~Claims 1-4~~ Claims 1-3.

6. (Withdrawn) A mask/reticle used for the creation of one or more layers of an integrated circuit that is created using the method of any of Claims 1-4.

7. (Withdrawn) A file describing a layer of an integrated circuit that has been prepared using the method of any of Claims 1-4.

8. (Currently amended) A method for preparing data that describes a layout of an integrated circuit by:

fragmenting polygons that describe structures ~~of an object~~ to be created via photolithography ~~comprising:~~;

performing an initial fragmentation that divides a polygon into a number of edge segments that extend around the perimeter of the polygon;

defining control sites for the edge segments;

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computing a simulation of ~~how the structures will be printed~~ a curvature of an image intensity at a location on a wafer corresponding to a control site in a direction parallel to an edge segment under defined process conditions; and

using the results of the simulation to adjust the fragmentation of the ~~polygons~~ polygon to add fragmentation endpoints in areas where the curvature of the image intensity is greater than a predetermined amount and/or to remove fragmentation endpoints where the curvature of the image intensity is less than a predetermined amount.

9.   (Canceled)

10.   (Canceled)

11.   (Canceled)

12.   (Currently amended) A computer ~~readable~~ storage medium that stores a sequence of program instructions that when executed by one or more computers cause the one or more computers to implement the method of ~~any of Claims 8-11~~ Claim 8.

13.   (Withdrawn) A file describing objects to be created via photolithography that has been prepared using the method of any of Claims 8-11.